STATEMENT OF BASIS

NSSG Holdings, LLC
Scotch Gulf Lumber, LLC-Jackson
Jackson, Clarke County, Alabama
Facility/Permit No. 102-S004

This Title V Major Source Operating Permit (MSOP) significant modification is issued under the provisions of ADEM Admin. Code r. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit. The current MSOP was effective on April 7, 2015, underwent a change of name/ownership on August 5, 2016, and expires on August 31, 2019.

On September 9, 2016, Scotch Gulf Lumber, LLC-Jackson (SG-J) was issued Air Permit Nos. 102-S004-X007, X008, and X009. This permitting action increased the 12-month rolling lumber production limit from 90 MMBF to 120 MMBF. The resulting increase in air emissions caused SG-J to become a major source of Hazardous Air Pollutants (HAPs).

SG-J produces finished yellow pine lumber. The significant sources of air pollutants at this facility are a 60 MMBtu/hr wood-fired boiler, a 34.841 MMBtu/hr natural gas-fired boiler, two 150 MBF dry kilns, one 125 MBF dry kiln, and a planer mill with a cyclone for the collection and transfer of wood residues.

Significant Modifications to MSOP

1. Incorporate the requirements of Air Permit No. X007, for the 34.841 MMBtu/hr natural gas-fired boiler (EU 007)
2. Incorporate the requirements of Air Permit No. X008, for the 60 MMBtu/hr wood-fired boiler (EU 001)
3. Incorporate the requirements of Air Permit No. X009, for the three (3) steam-heated dry kilns (EU 003, 004, 005)

Applicability: Federal Regulations

Title V

This facility is a major source under Title V regulations because the potential emissions for particulate matter (PM), particulate matter less than 10 microns in diameter (PM-10), particulate matter less than 2.5 microns in diameter (PM-2.5), carbon monoxide (CO), and volatile organic compounds (VOC) exceed the 100 TPY major source threshold. The facility is a major source of HAP as a result of production limit on the facility's three kilns (120 million board-feet per rolling 12-months). The potential emissions of HAP facility-wide are greater than 10 TPY for a single pollutant (methanol), yet below 25 TPY for any combination of HAP.

Prevention of Significant Deterioration (PSD)

This facility is located in an attainment area for all criteria pollutants, and its operations are not one of the 28 listed major source categories. Therefore, the major source thresholds of concern are 250 TPY for criteria pollutants. The facility is a synthetic minor source under PSD regulations for VOC. No criteria pollutant potential emissions exceed the major source thresholds.

New Source Performance Standards (NSPS)

The 34.841 MMBtu/hr natural gas-fired boiler is subject to 40 CFR Part 60, Subpart Dc, NSPS for boilers. SG-J is required to maintain either daily or monthly fuel usage records; these records must be kept in a permanent form suitable for inspection, be maintained on-site for a period of at least two (2) years from the date of generation, and be made available for inspection upon request. The 60 MMBtu/hr wood-fired boiler was constructed in 1973, which is prior to the applicability date for 40 CFR Part 60, Subpart Dc, NSPS for boilers. No other sources at SG-J are subject to NSPS regulations.

National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63

As a major source of HAP, there are two MACT standards currently applicable at the facility. The three dry kilns are affected sources under 40 CFR Part 63, Subpart DDDD, NESHAP for Plywood and Composite Wood Products (PCWP MACT). However, the only applicable requirement is the submittal of an Initial Notification. The 60 MMBtu/hr wood-fired boiler and 34.841 MMBtu/hr natural gas-fired boiler are affected sources under 40 CFR Part 63, Subpart DDDDD, NESHAP for Industrial, Commercial, and Institutional Boilers at Major Sources (Boiler MACT). This regulation will require the addition of emission limitations, testing requirements, and work practice standards for EU 001, and recordkeeping, and reporting for EU 001 and EU 007. According to 40 CFR §§63.7490 and 63.7575, EU 001 is classified as an existing hybrid suspension grate boiler (HSG) and EU 007 is classified as a new unit designed to burn gas 1 fuels.

According to 40 CFR §63.7495(c), if an area source increases potential emissions such that it becomes a major source of HAP, (1) any new boiler at the existing source must be in compliance with this subpart upon startup, and (2) any existing boiler or process heater at an existing area source of HAP must be in compliance with this subpart within 3 years after the source becomes a major source of HAP. The compliance date for EU 001 is September 9, 2019. EU 007 is not subject to the emission limitations in Tables 1 through 2 or 11 through 13, or the operating limitations in Table 4 to Subpart DDDDD (40 CFR §63.7500(e)) because it is classified as a new unit designed to burn gas 1 fuels. For EU 007, the initial tune-up was conducted on November 19, 2015, and the Initial Notification and Notification of Compliance was submitted to the Air Division on September 12, 2016.

Continuous compliance for EU007 would be demonstrated by conducting subsequent annual tune-ups of the boiler in accordance with 40 CFR §63.7540(a)(10). Each subsequent annual tune-up must be conducted no later than 13 months after the previous tune-up (40 CFR §63.7515(d)). In accordance with 40 CFR §63.7540(a)(13), if the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

EU 007 is limited to the use of natural gas only as a fuel to fire the burner. Should SG-J wish to switch fuel types, prior approval must be granted by the Air Division. Upon approval, SG-J may switch fuels or make a physical change to the boiler in accordance with 40 CFR §63.7545(f). If the fuel switch or physical change to the boiler results in the applicability of a different subcategory, SG-J would be required to submit notification within 30 days of the change.

An annual compliance report must be submitted by January 31 of each year for the previous calendar year containing the applicable information specified in 40 CFR §63.7550. In accordance with 40 CFR §63.7555, SG-J would be required to maintain a copy of each notification and report submitted to comply with Subpart DDDDD, including all documentation supporting any Initial Notification, Notification of Compliance Status, or compliance report submitted according to the requirements in 40 CFR §63.10(b)(2)(xiv). Also, the permittee must keep records of performance tests, fuel analyses, or any other applicable compliance demonstrations and performance evaluations as required in 40 CFR

§63.10(b)(2)(viii). In accordance with 40 CFR §63.7560, all records are required to be kept in a form suitable and readily available for expeditious review. Each record is required to be retained for a period of five years following the date of each recorded action. For the first two years of this five year period, the records are required to be kept on-site. Records may be kept off-site for the remaining 3 years.

State Regulations

Particulate Matter

The 60 MMBtu/hr wood-fired boiler is subject to the particulate matter emission limitation of ADEM Admin. Code r. 335-3-4-.08(2)(d). The allowable emission rate for this boiler is 0.20 grains per dry standard cubic foot, adjusted to 50% excess air.

The 34.841 MMBtu/hr natural gas-fired boiler is subject to the particulate matter emission limitation of ADEM Admin. Code r. 335-3-4-.03. The allowable emission rate for this boiler is calculated using the equation below:

$$E = 1.38H^{-0.44}$$

where E = Emissions in lb/million BTU
H = Heat Input in millions of BTU/hr

The three dry kilns and the planer mill are subject to the particulate matter (as TSP) emission standards for process industries [ADEM Admin. Code r. 335-3-4-.04(1)]. The allowable particulate emission rates for these units are calculated using the appropriate equation below:

$$E = 3.59P^{0.62} \quad (P < 30 \text{ tons/hour})$$
or
$$E = 17.31P^{0.16} \quad (P \geq 30 \text{ tons/hour})$$

where E = Emissions in pounds/hour
P = Process weight in tons/hour

Visible Emissions

All sources of particulate emissions at the facility are subject to the State visible emission standards of ADEM Admin. Code r. 335-3-4-.01, which states that any source of particulate emissions shall not discharge more than one 6-minute average opacity greater than 20% in any 60-minute period and, at no time, shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%.

Sulfur Dioxide

Both boilers are subject to the sulfur dioxide emission standard of 4.0 lb/MMBtu for fuel combustion equipment as outlined in ADEM Admin. Code r. 335-3-5-.01(1)(b).

Emission Testing and Monitoring

001 – 60 MMBtu/hr wood-fired boiler with multiclone and two-stage wet venturi scrubber and ash reinjection

The wood-fired boiler is subject to emission testing which is required every 5 years to determine compliance and verify/set parametric monitoring for the wet scrubber. The facility last conducted a performance test of this boiler for particulate matter on July 30, 2014. The test demonstrated compliance with the applicable emission standard and validated compliance with the established minimum pressure differential across the venturi scrubber (14" of water column) and the minimum recirculation flow rate

to the venturi scrubber (154 gpm). For periodic emission monitoring, SG-J would be required to visually observe the exhaust from the boiler stack for the presence of greater than normal emissions.

007 – 34.841 MMBtu/hr natural gas-fired boiler
Only natural gas shall be burned as fuel in this unit, therefore, no routine testing or monitoring would be required.

003, 004, & 005 – Two (2) 150 MBF (Emission Unit Nos. 003 & 004) and one (1) 125 MBF (Emission Unit No. 005) High Temperature, Steam-heated Lumber Dry Kilns
To determine compliance with the production limits on the kilns, the permittee would be required to calculate and record production on a monthly and 12-month rolling total basis within ten (10) days of the end of each calendar month.

006 – Planer Mill Shavings Pneumatic Transfer with cyclone
For compliance with the particulate and visible emission standards, emission monitoring for the cyclone would include:

- At least weekly during daylight hours, while the process is operating, the permittee shall visually observe the exhaust from each cyclone for the presence of greater than normal visible emissions.
- Whenever observed visible emissions are greater than normal from the cyclone, corrective action shall be initiated as soon as practicable but no longer than 24 hours from the time of observation, followed by an additional observation to confirm that emissions have been reduced to normal.
- The cyclone shall be inspected for proper operation and cleaned at least annually, but more frequently whenever visible emissions are observed to be greater than normal from the cyclone. If the results of the inspection indicate that cleaning or maintenance is needed, such action shall be initiated as soon as practicable but no longer than 24 hours from the completion of the inspection.

Compliance Assurance Monitoring (CAM)
The 60 MMBtu/hr wood-fired boiler (EU 001) is equipped with a two-stage Venturi scrubber. The pre-controlled and post-controlled particulate emissions from the boiler are greater than the applicable major source threshold. Although, this boiler is an affected source under Boiler MACT. The Boiler MACT compliance date for this source is September 9, 2019. Therefore, the 60 MMBtu/hr wood fired boiler will comply with CAM for the duration of this Title V Permit. Cam for this unit includes monitoring and recording the pressure differential across the scrubber and the water flow rate to the scrubber at least once every fifteen minutes and reducing the data to 3-hour block averages. In July 2014, S&G conducted testing as required and established a 3-hour average pressure differential across the wet scrubber at 14 inches of water column and a 3-hour average scrubber water flow rate of 154 gallons per minute. The minimum water flow rate and differential pressure would be verified/reestablished during performance testing required at least every 5 years.

Recordkeeping and Reporting Requirements

The records required for Emission Unit No. 001 would include:

- All available process records and operator's logs verifying the boiler's operating parameters.
- The date, time, and results of each daily observation for greater than normal visible emissions from the boiler stack.
- The date(s), time, nature, and results of any corrective action taken when greater than normal visible emissions were observed from the boiler stack or when an excursion from an emission

monitoring parameter occurred.

- The date, time, and duration of all startups and load changes.
- Beginning September 9, 2019, the facility must report each instance in which each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to 40 CFR 63, Subpart DDDDD that apply to this unit were not met.
- The facility must submit a Notification of Compliance Status report as required by 40 CFR §§63.7545. For the initial compliance demonstration for the boiler, the Notification of Compliance Status, including any performance test results and fuel analyses, must be submitted before the close of business on the 60th day following the completion of all performance tests and/or other initial compliance demonstrations for the boiler according to 40 CFR §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in 40 CFR §63.7545(e), as applicable. Also, a report must be prepared and either submitted or kept on file after the required boiler tune-up is completed which should contain CO and O2 measurements before and after tune-up, description of corrective actions after tune-up, and the type and amount of fuel used over 12 months prior to the annual tune-up.
- The facility, in accordance with 40 CFR §63.7555, must keep a copy of each notification and report submitted to comply with Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report submitted. Also, the facility must keep records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations.

The records required for Emission Unit No. 007 would include:

- The daily or monthly fuel usage must be maintained on-site in a permanent form for at least two years from the date of generation of the record.

The record required for Emission Unit Nos. 003, 004, & 005 would include:

- Records of the total production maintained on a monthly and 12-month rolling total basis.

The records required for Emission Unit No. 006 would include:

- The date, time, and results of each weekly observation for greater than normal visible emissions from the cyclone.
- The date(s), time, nature, and results of any corrective action taken when greater than normal visible emissions were observed from the cyclone.
- The date(s) and time the cyclone was inspected for proper operation and, if the results of the inspection indicated that cleaning or emissions-related maintenance was needed, the date(s) and nature of the cleaning/maintenance performed.

The facility would also be required to include the following information (as applicable) for Emission Unit Nos. 001, 003, 004, 005, and 006 in the Semiannual Monitoring Report required by General Permit Proviso No. 21.

- A statement as to whether all emission observations were completed as required during the reporting period, and if not, the date(s) and reason(s) why the monitoring was not performed.
- The date(s), time, nature, and results of any corrective action taken when (1) greater than normal visible emissions were observed from the emission unit, (2) an inspection of Emission Unit No. 006 indicated that cleaning or emissions-related maintenance was needed, or (3) an excursion from a CAM monitoring parameter occurred.
- The monthly and 12-month rolling totals of lumber/timber production calculated during the reporting period.

- For Emission Unit No. 006 only, a statement as to whether the annual inspection of the cyclone was accomplished during the reporting period, and if so, the date and results of the inspection.

Recommendation

Based on the above analysis, I recommend SG-J's MSOP (102-S004) Significant Modification be issued with the conditions noted above, pending the resolution of any comments received during the 30-day public comment period and 45-day EPA review period.

Chris Ailor
Chemical Branch
Air Division

June 14, 2017
Date